



First record of the genus *Aulacophilus* Smith, 1869 (Hymenoptera, Crabronidae) in Panama

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Abstract

The genus *Aulacophilus* Smith, 1869 (Hymenoptera, Crabronidae) is recorded for the first time in Panama based on examination of female specimen of *Aulacophilus chrysotrichus* Antropov, 1999.

Key words

Chepo district; Panama province; *Aulacophilus chrysotrichus*; Trypoxylini; apoid wasps.

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Introduction

Aulacophilus Smith, 1869 is a genus of apoid wasps belonging to the tribe Trypoxylini (Hymenoptera, Crabronidae), and includes 6, exclusively New World species (Antropov 1999). Two species are present in Central America: *A. septentrionalis* Antropov, 1999 from El Salvador and Mexico (Antropov 1999) and *A. eumenoides* Ducke, 1904 from Costa Rica, Ecuador, Peru, Brazil, and Bolivia (Ducke 1904, Bohart and Menke 1976, Antropov 1999). There are 4 other species, all from South America.

Host larvae records for *Aulacophilus* are scarce and are limited to a single report of *A. eumenoides* Ducke from Ecuador, with the cell containing juvenile spiders of 3 species of the family Thomisidae (Cooper 1986). Like the other genera of the Trypoxylini, the members of the genus *Aulacophilus* are predators of Araneae (Amarante 2006).

According to Antropov (1999), *Aulacophilus* are rare in collections, with only by occasional specimens. Here, we report the first record of *A. chrysotrichus* Antropov, 1999 in Panama, which is now known from 9 specimens.

Methods

The specimen was collected using a single Malaise trap for eight days. The specimen of *A. chrysotrichus* was identified using Antropov's (1999) key to species of the genus *Aulacophilus*. Posteriorly, 7 photos of the specimen captured in Panama were sent to Alexander Antropov, who concluded that this specimen and a paratype are conspecific. The specimen was pinned and deposited in the Museum of Invertebrates Graham Bell Fairchild, University of Panama (MIUP), Panama City, and assigned the code MIUPCA1.

Results

Aulacophilus chrysotrichus Antropov, 1999 (Fig. 1)

Aulacophilus chrysotrichus Antropov 1999: 339–341. Holotype ♀, Colombia, Tolima, Armero, malaise trap, 30.i–5.ii.1977 (E.L. Peyton), USNM 01198537.

Material examined. Panama: Panama province, Chepo

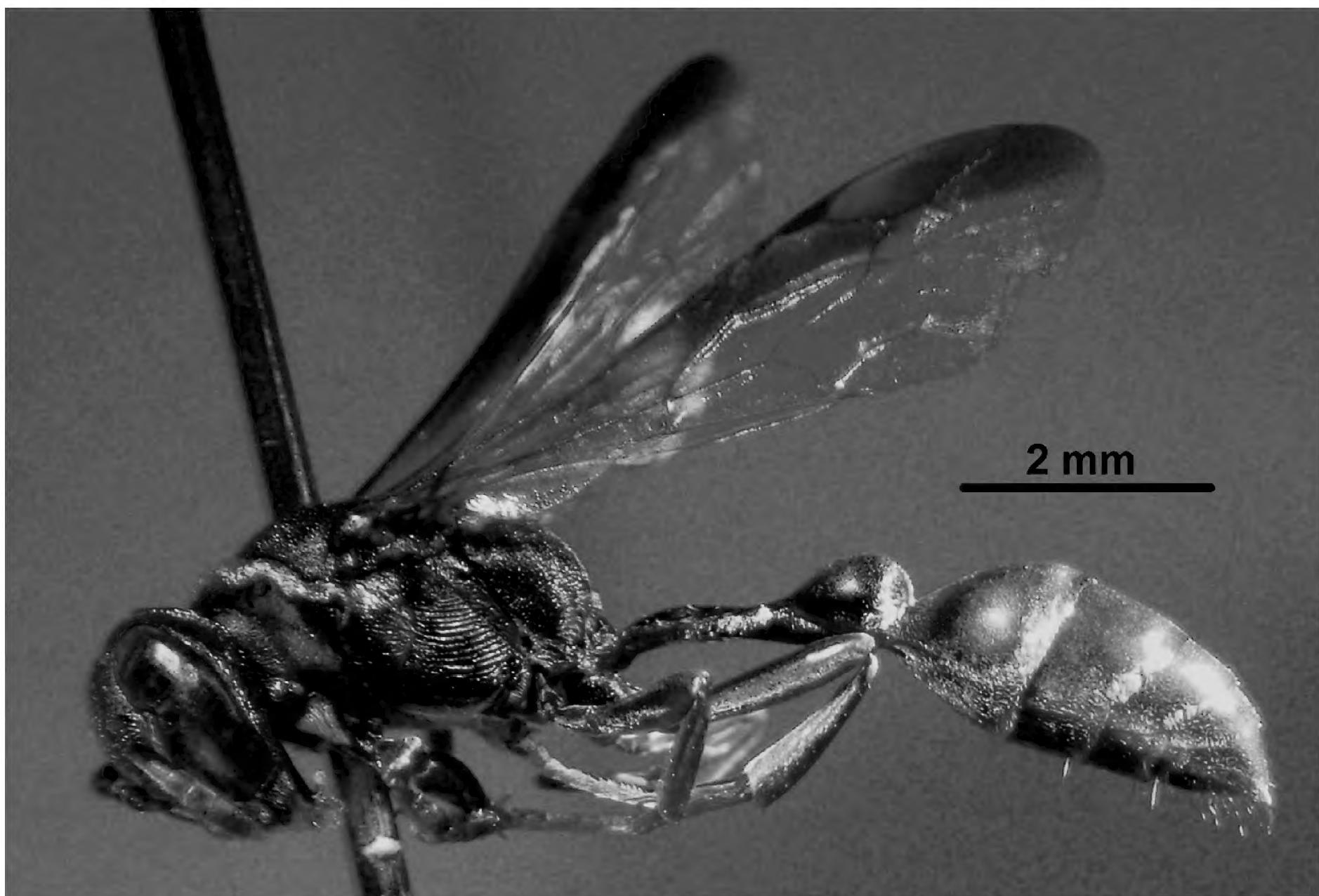


Figure 1. *Aulacophilus chrysotrichus* Antropov, 1999, female, lateral view (MIUPCA1).

district, La Primavera, 09°10' N, 079°05' W, 22 m above sea level, 26.ix–3.x.2016, col. E. Barrios, Malaise trap (1 ♀).

Diagnosis. *Aulacophilus chrysotrichus* resembles *A. vespoides* F. Smith, 1869. Both species differ from other species in the genus by the golden pubescence of the

body, the largely pale coloration of the mandibles and humeri, the mesopleura with more than 12 longitudinal carinae below scrobe, the postscutellum without coarse longitudinal carinae, the pronotal ridge without posterior median depression, the propodeum with a short preapical depression, and the non-outlined dorsal field (Antropov



Figure 2. Map showing the known distribution of the *Aulacophilus chrysotrichus* Antropov, 1999, including first record from Panama.

1999). *Aulacophilus chrysotrichus* differs from *A. vespoides* (judging from females) by the following: antennae entirely black, lateral ocelli larger than median one, propodeum with exclusively golden pubescence, side of propodeum without oblique striation, and without carinae laterally to preapical depression, while *A. vespoides* has antennae reddish brown basally, all ocelli equally sized, dorsal field of propodeum with narrow median carina, propodeum with golden and white pubescence, and side of propodeum densely striate, separated by clear carinae laterally to preapical depression (Antropov 1999).

The only difference between them is that the paratype has somewhat lighter mandibles, pronotal lobes, and legs (A. Antropov, pers. comm.).

Discussion

Here, we report the first record of the genus *Aulacophilus* and *A. chrysotrichus* from Panama, and we extend the known range of this species, previously recorded only from Colombia and Venezuela (Antropov 1999), to Panama (Fig. 2). The new record is approximately 650 km northwest from the nearest known occurrence in Armero, Colombia.

Nothing is known about its biology. The specimen from Panama was caught in a secondary forest, modified by human activities.

Antropov (1999) indicated that specimens of the genus *Aulacophilus* are rare in collections, with 22 specimens examined by him in his review of the genus. However, *A. chrysotrichus* is the most abundant species with 8 specimens. To date, we have examined about

20,000 crabronid specimens collected in many localities and various habitats in Panama, but can confirm the presence of only a single specimen from Panama.

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Authors' Contributions.

RAC identified the specimen and sent photos to A. Antropov; YJA and RAC wrote and reviewed the manuscript text; RAC photographed the specimen.

References

Amarante STP (2006) Familia Crabronidae. In: Fernández F, Sharkey MJ (Eds) Introducción a los Hymenoptera de la Región Neotropical. Sociedad Colombiana de Entomología y Universidad Nacional de Colombia, Bogotá DC, 457–469.

Antropov AV (1999) Digger wasps of the genus *Aulacophilus* (Hymenoptera, Sphecidae, Trypoxylini). Entomological Review 79 (3): 332–343. [Translated from] Zoologicheskii Zhurnal 78 (5): 561–572.

Bohart RM, Menke AS (1976) Sphecid Wasps of the World. A Generic Revision. University of California Press, Berkeley, 695 pp.

Cooper M (1986) A note on the biology of *Aulacophilus eumenoides* Ducke (Sphecidae). Sphecos 11: 16.

Ducke A (1904) Zur Kenntnis der sphegiden Nordbrasiliens. Zeitschrift für Systematische Hymenopterologie und Dipterologie 4: 91–98.